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THE UNIVERSITY RECORDS

SERIES 3. NO. 5.

PROSPECTUS OF
THE COLLEGE OF AGRICULTURE
OF
CORNELL UNIVERSITY
1903—1904



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JULY, 1903
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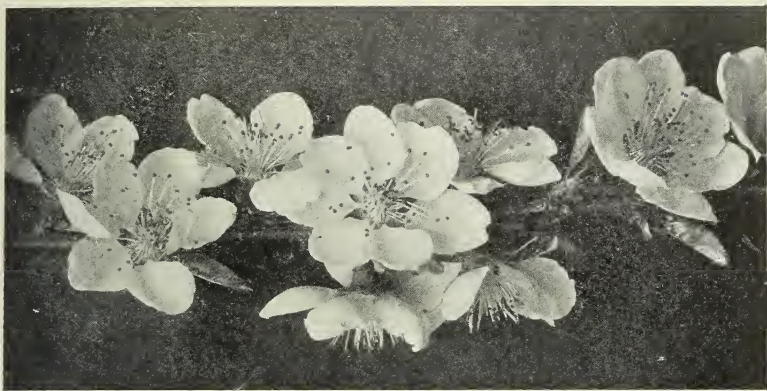
THE
ANNOUNCEMENT OF
COURSES



The complete announcement of regular and special courses, with subjects and hours, will be ready August 1.

The announcement of the winter-courses will be ready September 1.





I. WHAT THE COLLEGE IS.

The College of Agriculture is one of ten coördinate colleges and departments, comprising Cornell University. It has its own staff and equipment and devises its own courses of study. The aim of the College of Agriculture is to elevate the ideals of country living. This it attempts to do in three general ways: by giving instruction to those who come to the University for two years or more; by giving instruction by means of correspondence and other extension methods to those persons, young or old, who cannot come to the University or who can come but for a very limited time; by experimenting for the discovery of new truth in agricultural fields.

The College of Agriculture is founded on the Land Grant Act of 1862, whereby Congress appropriated the proceeds of the sales of certain lands to the maintenance of a college in each State to give instruction in agriculture and the mechanic arts. This grant marks an epoch in the history of education, because it provides for a system of education that shall have direct and definite relations with the daily work of persons who must earn their own living in the arts and industries. The College of Agriculture, therefore, seeks to interest the farm boy and the farm girl in the very things with which they live day by day,—the soil, the weather, the plant, the animal, the farm home, the school and all the customary rural affairs. It seeks both



A DAIRY ROOM.

to give them power to make the most of the farm, and to inspire contentment with the daily life.

The College is provided with land, stock, orchards, gardens, libraries and other equipments. The land is distributed in three contiguous areas, comprising altogether about 275 acres. The buildings comprise a dairy,

two barns, poultry quarters and forcing-houses. There are herds of cattle, sheep and swine, flocks of poultry, various farm horses. In the horticultural department is a good collection of fruit trees in orchards, and many kinds of specimen plants. Farm machinery and implements are also represented. The library facilities are ample, comprising a very large collection of rural books in the general university library, a practically complete series of Experiment Station publications in the Director's office, and small reference libraries in the Dairy Building and in the rooms of the Horticulturists' Lazy-Club.

Students entering the College of Agriculture are on an equal footing with students in any other college or department. They become a part of the general student body. They are under the special supervision of the Director of the College. Two special societies or clubs are organized and maintained by the students in the College of Agriculture—the Agricultural Association meeting every Tuesday night, and the Horticulturists' Lazy-Club, meeting every Monday night. In addition to these, the Winter-course students maintain an organization of their own. Recently there has been organized an "Agricultural Experimenters' League," to which all students are eligible, and which is designed for the furthering of experimental investigation and of arousing closer friendship amongst the farmers of the state.

Ithaca is situated at the head of Cayuga lake, near the center of New York state. It is a city of between 13000 and 14000 inhabitants. It is reached by the Lehigh Valley and Delaware, Lackawanna and Western railroads, and in summer by steamer on Cayuga Lake.

The region is a most beautiful and healthful one. The surface is exceedingly diversified. The University stands on a plateau about



INSECTARY FOR THE BREEDING AND STUDY OF
INSECTS.

400 feet above the lake. The country abounds in hills, gorges, waterfalls, marshes, forests and farms, supporting interesting and varied flora and fauna.

II. THE COURSES OF INSTRUCTION.

The regular instructional work of the College of Agriculture falls into two courses,—the full or four years' course leading to the degree of Bachelor of the Science of Agriculture (B.S.A.), and the special or two years' course, upon the completion of which a certificate is given. In addition to these, students may pursue agricultural subjects in the Graduate Department of the University, leading to the degrees of Master of Science in Agriculture (M.S.A.) and Doctor of Philosophy (Ph.D.). These degrees from the College of Agriculture are equal in importance to similar degrees in the other colleges.

A. The Regular or Four Years' Course.

Certain conditions are imposed on the student who would enter the University. Men must be at least sixteen years of age and women seventeen years. Certain preliminary subjects must have been compassed. There are two tests of proficiency in these subjects,—the student may pass an examination on them, or he may present an acceptable certificate showing that he has passed them elsewhere. The details of entrance are fully explained in the rules at the end of this circular.

The amount of work that a student performs is expressed in "hours." An "hour" represents the amount of time that the student spends in recitation-work or laboratory-work in any subject. It is the unit of computation when the credits are reckoned. A recitation-hour occupies an actual hour of time, as from ten to eleven



LAZY-CLUB ROOM.

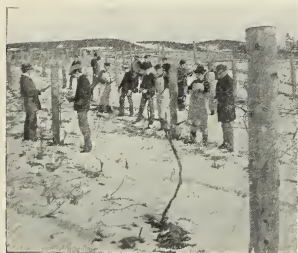
o'clock. The forenoons, from eight till one o'clock, are mostly given over to recitations. A laboratory-hour, however, occupies two and one-half hours of actual time, as from two to four-thirty o'clock. The afternoons are given over to laboratory work in fields, greenhouses, draughting rooms, dairy, chemical building and the like. The normal amount of work is 15 hours per week. Only by special permission of the faculty can a student take less than this or more than 18 hours. For example, a student might have the following work :



WINTER TOMATOES.

	Mon.	Tues.	Wed.	Thur.	Fri.	Sat.	Total hours.
Chemistry,	10-11		10-11		10-11	9-10	4
Botany,		10-11		10-11			2
Physics,	9-10		9-10		9-10		3
Economics,	8- 9		8- 9		8- 9		3
Drawing,		2-4:30		2-4:30			2
Drill,	2-4:30						1
Total hours per week,							15

The student "registers" at the beginning of each university year. That is, he lays out all his subjects, with the days and hours, for the entire year. For all elective work, his schedule must be approved by the Director. The University year is divided into two terms or semesters. The amount of work for the semester is computed in hours per week. That is, the student, in any semester, may take 15, 16, 17 or 18 hours per week. The following semester he may take any one of these four amounts. At the end of the year he has to his credit the sum of these hours, as $16+17=33$ hours. Before he can graduate, he must have a total credit of 120 hours, which is an average of 15 hours for 8 semesters. (The full announcement of the courses of instruction in the College of Agriculture for 1903-4 will be ready for distribution Aug. 1. Information concerning other colleges and the University in general may be obtained from the Register.)



PRUNING GRAPES.



WINTER STRAWBERRIES.

The four years' course comprises, first, the pursuit of certain fundamental subjects that are calculated to give the student a firm and broad foundation upon which to build his special work; and second, specific training in those subjects that are intimately associated with rural affairs. The fundamental subjects are pursued largely in the College of Arts and Sciences, and they cover approximately the first half of the course. The remainder of the course is taken directly with the professors in the College of Agriculture, although from the very first the student is under the immediate direction of the faculty of the College of Agriculture and his work is shaped with particular reference to agricultural affairs.

The fundamental work comprises studies in the following subjects: English, drawing, modern language, geology, physics, chemistry, animal physiology and pathology, plant physiology and pathology, biological laboratory drill, meteorology and climatology as applied to agriculture, economics, handicraft. These subjects are "required;" that is, they must be taken before the student is allowed to pursue the special work in the last two years of his course. Aside from these subjects, a certain amount of military drill and gymnasium work is required.

Most of the work of the last two years is "elective;" that is, the student may choose which subjects he shall take. He is at liberty to choose half the work of his last two years outside the College of Agriculture. Most of the special elective work in the College of Agriculture is associated with the following subjects or units:

(1) FERTILITY OF THE LAND, AS DETERMINED BY

- (a) Chemical tests.
- (b) Physical tests.
- (c) Bacteriological tests.
- (d) Actual experiments.

(2) AGRONOMY.

- (a) Farm practice.
- (b) Farm crops and cropping.



CHEESE CURING ROOM.

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(3) ANIMAL INDUSTRY.

- (a) Breeding.
- (b) Feeding.
- (c) General management.

(4) DAIRYING.

(5) HORTICULTURE.

- (a) Pomology or fruit-growing.
- (b) Olericulture or vegetable-gardening.
- (c) Floriculture and ornamental gardening.

(6) FARM MECHANICS.

- (a) Carpentry, painting, blacksmithing and general work with tools.
- (b) Farm implements and machinery.



CHEMICAL LABORATORY.

(7) RURAL ENGINEERING.

- (a) Surveying and farm lay-out.
- (b) Roads and bridges.
- (c) Irrigation.
- (d) Drainage.

(8) LANDSCAPE GARDENING AND RURAL ART

(9) THE FARM HOME.

- (a) The homestead.
 - (b) Rural architecture.
 - (c) Home sanitation.
 - (d) Woman's work and domestic science.
 - (e) The home life and home literature.
- (10) **TEACHER'S COURSE IN NATURE-STUDY AND COUNTRY LIFE.**
- (11) **RURAL ECONOMY**, including such topics as history and literature of agriculture, farm bookkeeping, farm forestry, rural law, rural economics, marketing, political and social questions, subjects connected with organic evolution.

Aside from these subjects, the student may pursue special advanced



ROOT GRAFTING.

work in Entomology, and in Chemistry in its relations with agriculture, leading to professional training in these fields.

It will be noticed that these subjects cover a much wider field than mere technical agriculture. They are designed to reach the farm home, the rural school and the larger questions of citizenship. It is particularly desired to call attention to the teacher's course in Nature-Study and allied topics (No. 10). This is open to all persons in the University, in whatever college, who expect to teach. It will also be open as a special course to teachers in the schools. It is hoped that

it will afford a means of training teachers for taking up similar work in the public schools, thereby spreading an interest in country life. The Ithaca public schools are coöperating in this movement, and children will be organized into nature-study clubs for the purpose of supplying practice classes. A large school-garden is now being established on the University premises. The neighborhood of Ithaca affords unsurpassed advantages for nature-study work. Students may also have access to the records and methods in the Extension Department of the College of Agriculture in which nearly 3,000 teachers are registered as members of the Home Nature-Study Course,

more than 16,000 children as Junior Naturalists and a very large number as Junior Gardeners.

Aside from the regular work provided by the College of Agriculture, there are lectures by non-residents who are expert in various specialties; and twice each month the Director will meet all the students in the College for discussion of timely topics.



IN THE GRAIN FIELD.

B. The Special Course.

This is a two-year course designed to meet the needs of those young men and women who desire to pursue some of the leading agricultural subjects but who cannot take a full course. Such students enter the University without examination upon recommendation by the Director. They must be at least eighteen years of age and must give evidence that they are well enough grounded in elementary subjects to enable them to prosecute the special work with efficiency. For these students a special course is now to be arranged, the first

year of which is fundamental sub- is planned with to its bearing on tical agriculture. admission should ally or by letter to the College of

The special ferentiated into

person may take more of dairying or of horticulture or of other subjects in which he is specially interested. A special course is also designed in Landscape Gardening and in Nature-Study (the latter for teachers).



PRUNING.

to be devoted to jects. The course special reference questions of prac- Application for be made person- the Director of Agriculture.

students are dif- groups, so that a

III. EXTENSION WORK.

The Department of Extension Work aims to reach those persons who cannot go to college or who can go for such a brief time that they cannot take anything like a college course. This department is maintained by the State. The department comprises many efforts, the leading ones being :

- (a) Experimenting and testing about the State and at Ithaca, for the purpose, primarily, of teaching the farmer how to handle his own problems.
- (b) The Farmers' Reading-Course ; the Farmers' Wives' Reading-Course.
- (c) The Nature-Study work, comprising the junior gardeners,



LAYING OUT A BUILDING.



DAIRY BUILDING.

junior naturalists, work in connection with county and local fairs, improvement of school premises, home nature-study course, lectures and demonstrations in schools and at teachers' meetings.

(d) Coöperation with high schools in introducing agricultural and country life topics.

(e) Winter-course in general agriculture of eleven weeks at Cornell University.

(f) Winter dairy-course of eleven weeks at Cornell University.

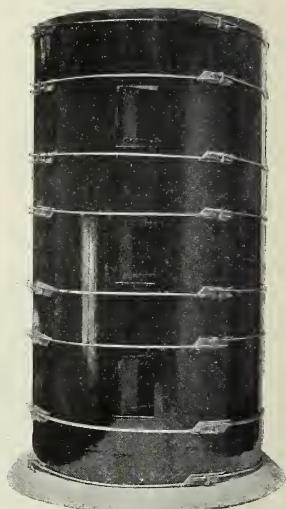
It is the purpose of this circular to explain only the winter Courses (e and f). A special circular describing these courses in detail may be had on application by Sept. 1, 1903.

A. The General Winter-Course.

This is a special condensed course designed for young men and women who desire to get the modern point of view and the current methods in farming. Instruction is given by regular University teachers, by means of lectures, text-books and laboratories, with special emphasis laid on the laboratory or practice work. Persons who are seventeen years of age may be admitted by the Director of the College without a formal examination, but they are required to file a letter of recommendation and to satisfy the Director that their previous training has been such that they can pursue the studies with profit to themselves and credit to the College.

The scheme of studies for the winter of 1904 (January to March) is not yet completed. The following courses of the past two winters will indicate the general character of the work, although the instruction is likely to be greatly modified in the year to come :

Prescribed work—Agriculture, 5 hours per week.



MODEL OF A SILO.



DAIRY LABORATORY.

Horticulture and Botany, 3 hours per week.

Animal industry, 2 hours per week.

Agricultural Chemistry, 2 hours per week.

Two hours per day of practice in educational work in barns, dairy house, forcing-houses and laboratories.

Elective work—A minimum of four hours per week must be taken in addition to the prescribed work, from the subjects named below :

Entomology, 2 hours per week.

Dairy Husbandry, 2 hours per week.

Poultry Keeping, 2 hours per week.

The farm library, 2 hours per week.

Political Economy, 1 hour per week.

Diseases of Farm Animals, 1 hour per week.

Special lectures by members of the faculty and non-residents, 1 hour per week.

B. The Winter Dairy-Course.

This course is designed primarily to meet the needs of those butter and cheese makers who desire more thorough and comprehensive instruction, and to train those who are looking toward butter and cheese making as a profession. The instruction is largely given from the standpoint of the factory, while that in the General Course in Agriculture (No. 4, page 8) is given with particular reference to the needs of the farm dairy.

No more than fifty can be accommodated in the building. The class will be limited to this number and applications should be made at as early date as practicable in order to insure admission.

The instruction is partly by lectures and recitations, but largely by actual practice in



HARVEST-TIME.

the creamery, cheese factory and dairy laboratory, the order being about as follows :

Lectures on milk and its products, 2 hours per week.

Lectures on subjects related to dairying, 10 hours per week.

Cheese room practice, twice weekly, 4-6 hours each.

Butter room practice, twice weekly, 4-6 hours each.

Dairy laboratory practice, twice weekly, 2-4 hours each.

Problems and bookkeeping, 2 hours per week.

The lectures on milk include a full discussion of the structure of the milk gland, the secretion of milk and its care and preservation during all the process of manufacture. The lectures are supplemented by constant references to the current dairy literature as found in periodicals and experiment station publications. These lectures are given two days per week extending through the term. On alternate days there will be given short series of lectures (two to ten in a course) on various subjects intimately related to dairy husbandry and factory management. These include the care and management of dairy cattle, the compounding and feeding of rations, the preservation and use of farm manures and commercial fertilizers, the symptoms and treatment of the more common diseases of cows, the outlines of dairy bacteriology, the care and management of engines and boilers, etc., etc. Most of these series are given by special lecturers of the College of Agriculture. Full instruction, under competent factorymen, is given in butter-making and cheese-making.

IV. AGRICULTURAL EXPERIMENT STATION.

The Agricultural Experiment Station of Cornell University is a Department of the College of Agriculture. Incidentally, students may acquire instruction from observing and discussing the experiments which are being conducted. The federal law passed March 2, 1887, briefly outlines the object of the Experiment Station in the following words : "To aid in acquiring and diffusing among the people of the United States useful and practical information on the subjects connected with agriculture, and to promote scientific investigation and experiment respecting the principles and applications of agricultural science." . . . It further provides " That bulletins

or reports of progress shall be published at said station at least once in three months, one copy of which shall be sent to each newspaper in the states or territories in which they are respectively located, and to such individuals actually engaged in farming as may request the same and as far as the means of the station will permit." The entire plant of the College of Agriculture is used, as occasion demands, for conducting experiments in animal and plant growth and reproduction, and in applied, comparative and scientific research and investigations. The Agricultural Experiment Station was first organized in 1879. It was reorganized in 1888, after the passage of the federal law.

The publications of the Agricultural Experiment Station include to date fifteen annual Reports and two hundred and eleven bulletins. These publications are distributed free to such residents of the state as apply for them so far as the means of the station will permit.



REGULATIONS GOVERNING ADMISSION TO THE FOUR YEARS' COURSE LEADING TO THE DEGREE OF BACHELOR OF THE SCIENCE OF AGRICULTURE.

I. CONDITIONS OF ADMISSION

Candidates must be at least sixteen years of age, or, if women, seventeen. They must have certificates of good moral character, and students from other colleges or universities are required to furnish from those institutions certificates of honorable dismissal.

Candidates for admission must file their credentials and obtain permits for examination at the Registrar's office. The results of examinations may be ascertained from the Registrar.

The following subjects are required for admission: English, History [the student must offer one of the four following divisions in history (a) American, including Civil Government (b) English (c) Ancient, to 814 A. D. (d) Mediæval and Modern European, from 814 A. D.]. Plane Geometry, Elementary Algebra and either A, B, or C, as below.

A. Greek and Latin.

B. Latin and either advanced French or Advanced German.

C. Advanced French, Advanced German and Advanced Mathematics.

An equivalent of any one of the three groups, A, B, and C, may be offered, provided five counts are offered. Latin counts 3, Greek, French and German 2 each. Advanced Mathematics (Solid Geometry, Advanced Algebra, Plane and Spherical Trigonometry) 1, provided, however, that the student before graduation must have passed in one modern language if they were not offered for entrance.

An alternate requirement instead of Advanced Mathematics may be offered in Physics, Chemistry, Botany, Geology or Zoölogy.

For other details as to subjects and methods of admission, see University Register pages 33-74.

For Admission to the freshman class, communication should be addressed to the Registrar. See University Register pages 33-54.

For admission to advanced standing from other colleges and universities, all communications should be addressed to the Director of the College of Agriculture. See University Register pages 53-54.

For admission to graduate work and candidacy for advanced degrees, communications should be addressed to the Dean of the University Faculty. See University Register pages 65-74.

ADMISSION WITHOUT EXAMINATION.

(A) On Regents' Credentials.

Diplomas and sixty count academic certificates issued by the Regents of the University of the State of New York are accepted in the place of examination in all the subjects required for entrance which are covered by such credentials, including upon the recommendation of the University departments concerned, the subjects of French, German, Physics, Chemistry, Botany, Geology, and Zoölogy. A statement from the teacher giving in detail the work done and

the proficiency attained in these subjects must be submitted by the holder of the diploma.

Certificates and pass cards issued by the Regents are not accepted unless they are presented by the holder of a Regents' diploma or sixty count academic certificate.

To secure exemption from the entrance examination in English the Regents diploma or sixty count academic certificate must cover first year English, second year English, and *either* third year English or English Reading.

Application for credit in all subjects for which credit is desired, must be made at the time of the admission of the applicant, and not be postponed to any later date in his course.

Diplomas, certificates and statements should be sent by mail to the Registrar before the opening of the term.

(B) On School Certificates.

The following rules and regulations have been adopted by the Faculty of Cornell University on the subject of admission by certificate:

1 Certificates of work done in public or private schools, in or out of the state will not be accepted in lieu of examinations, unless the applicant has completed a full course in the school, and has been duly graduated after at least one year in the school, and the University authorities are satisfied regarding the standing of the school.

2 The application for the admission of a student by certificate must be made by the principal of the school and not by the candidate himself.

3 The application from the principal must be accompanied by full and specific information with regard to the completeness and thoroughness of the studies and course in which instruction is given. In case a catalogue or circular is published, a copy thereof should also be furnished.

4 Admission by certificate is in all cases provisional. If a student fail in any subject in the University that depends upon an entrance subject for which a certificate has been accepted, the credit for that entrance subject may be cancelled. Certificates from schools whose students prove to be imperfectly fitted will ultimately not be considered.

5 Subjects in which an examination has been passed for admission to the school, may be included in the certificate, but in all cases the full information called for by the blank should be given.

6 *No school certificate will be accepted in place of entrance examination in English.*

7 The committee having charge of the acceptance of certificates may meet at any time during the collegiate year, but the certificates should be forwarded as soon after the graduation of the student as is possible, and at least as early as the first of September.

8 The University does not engage in advance to accept the certificates of any school, and the previous acceptance of such certificates merely raises the presumption that similar certificates may be accepted again, but does not establish a permanent right to such acceptance.

Application for credit in all subjects for which credit is desired, must be made at the time of the admission of the applicant, and not be postponed to any later date in his course.

All communications on this subject and all certificates must be addressed to the Registrar, from whom also blank forms for certificates may be obtained.

(C) On the Certificates of the College Entrance Examination Board.

The certificates issued as the result of the examinations to be held in June by the College Examination Board of the Middle States and Maryland will be

accepted under the same conditions as if such examinations were held by this University.

For further particulars address Secretary of College Entrance Examination Board, Sub-station No. 84, New York City.

ADMISSION ON EXAMINATION.

Examinations in all the subjects required for admission to the University are held at *Ithaca* in September, at the beginning of the first term.

The certificates issued as the result of the examinations to be held in June by the College Examination Board of the Middle States and Maryland will be accepted under the same conditions as if such examinations were held by this University. For further particulars address Secretary of College Entrance Examination Board, Sub-station No. 84, New York City.

No examination of candidates for admission will be held at any other times or places. Specimen copies of examination papers will be sent on application to the Registrar of the University.

II. FEES AND EXPENSES.

Tuition is free to students pursuing the prescribed course in Agriculture, and intending to complete that course; and to special and graduate students in Agriculture taking at least two-thirds of their entire work in the departments of agriculture, horticulture, and in the courses in agricultural chemistry and economic entomology. Students cannot change from the College of Agriculture to other departments of the University unless they pay all tuition that would have been due that department, had they entered it at first. Winter-Course students from outside the State pay tuition.

Incidental fees required as follows:

Post graduate students, term one-half year.....	\$ 7 50 per term
Regular students, 3d and 4th years, term one-half year.....	7 50 "
Special students, term one-half year	7 50 "
For general winter-course students, term 11 weeks, lab. fees	5 00 "
For general winter-course and dairy-course students from outside New York State, term 11 weeks, tuition	30 00 "
For general winter-course students in Agriculture electing prac- tice in dairy husbandry, term 11 weeks, laboratory fees	12 50 "
For winter dairy-course students, term 11 weeks, lab. fees.....	15 00 "

A fee of \$5, to cover expenses of graduation, degrees, etc., is charged to each person taking the baccalaureate degree. This fee must be paid at least ten days before Commencement.

The fee charged for an advanced degree is \$10, and it must in all cases be paid at least ten days before Commencement.

Deposits are required in the various laboratories where work is taken, ranging from \$1.50 to \$10.00 per term according to the amount and nature of the work.

The expense of living in Ithaca varies from \$3.50 to \$5.00 per week for board and lodging.

III. CALENDAR.

The entrance examinations for students in the Regular Course are held in June and September. In 1903, the entrance examinations begin Sept. 15. The instruction begins Sept. 25, 1903; in the General Winter Course in Agriculture and the Dairy Course, Jan. 4, 1904. Students may be excluded if not present at the beginning of the term.



CORNELL UNIVERSITY

DEPARTMENTS AND COLLEGES

GRADUATE DEPARTMENT

Degrees, A.M., Ph.D., etc.

COLLEGE OF ARTS AND SCIENCES

Degree, A.B.

COLLEGE OF LAW

Degree, LL.B.

MEDICAL COLLEGE

Degree, M.D. New York City and Ithaca

NEW YORK STATE VETERINARY COLLEGE

Degree, D.V.M.

COLLEGE OF AGRICULTURE

Degree, B.S.A.

NEW YORK STATE COLLEGE OF FORESTRY

Degree, B.S.F.

COLLEGE OF ARCHITECTURE

Degree, B.Arch.

COLLEGE OF CIVIL ENGINEERING

Degree, C.E.

SIBLEY COLLEGE OF MECHANICAL ENGINEERING AND MECHANIC ARTS

Degree, M.E.